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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,766	09/29/2006	Pierre-Alexandre Kaminski	296011US0PCT	5633
22850 7590 08/07/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER JOLKE, MICHELE K				
ART UNIT		PAPER NUMBER		
1636				
NOTIFICATION DATE		DELIVERY MODE		
08/07/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

### Office Action Summary

**Application No.**

10/594,766

**Applicant(s)**

KAMINSKI, PIERRE-ALEXANDRE

**Examiner**

MICHELE K. JOIKE

**Art Unit**

1636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 33-39 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40 is/are allowed.
- 6) ☒ Claim(s) 13-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/29/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date 9/29/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election with traverse of Group II in the reply filed on May 14, 2009 is acknowledged. The traversal is on the ground(s) that Applicants traverse on the grounds that no adequate reasons and/or examples have been provided to support a conclusion of patentable distinctiveness between the identified groups. Also, it has not been shown that a burden exists in searching the claims of the three groups. This is not found persuasive because the groups are not related because they lack the same special technical feature because the N-deoxyribosyl transferase is taught by US 7,381,555 and is not novel. The Examiner does not need to show a search burden for lack of unity of invention.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-12 and 33-39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on May 14, 2009.

Claims 13-32 and 40 are examined.

***Priority***

This application claims benefit to PCT application No. PCT/FR05/000743, filed on March 29, 2005, in a language other than English. Since the instant application is claiming benefit as a continuation of PCT/FR05/000743, PCT/FR05/000743 must be

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submitted with a certified English translation. Appropriate correction is required. See below.

**35 U.S.C. 365 Right of priority; benefit of the filing date of a prior application.**

(a) In accordance with the conditions and requirements of subsections (a) through (d) of section 119 of this title, a national application shall be entitled to the right of priority based on a prior filed international application which designated at least one country other than the United States.

(b) In accordance with the conditions and requirements of section 119(a) of this

title and the treaty and the Regulations, an international application designating the United States shall be entitled to the right of priority based on a prior foreign application, or a prior international application designating at least one country other than the United States.

(c) In accordance with the conditions and requirements of section 120 of this title, an international application designating the United States shall be entitled to the benefit of the filing date of a prior national application or a prior international application designating the United States, and a national application shall be entitled to the benefit of the filing date of a prior international application designating the United States. If any claim for the benefit of an earlier filing date is based on a prior international application which designated but did not originate in the United States, the Director may require the filing in the Patent and Trademark Office of a certified copy of such application together with a translation thereof into the English language, if it was filed in another language.

**35 U.S.C. 361 Receiving Office.**

(a) The Patent and Trademark Office shall act as a Receiving Office for international applications filed by nationals or residents of the United States. In accordance with any agreement made between the United States and another country, the Patent and Trademark Office may also act as a Receiving Office for international applications filed by residents or nationals of such country who are entitled to file international applications.

(b) The Patent and Trademark Office shall perform all acts connected with the discharge of duties required of a Receiving Office, including the collection of international fees and their transmittal to the International Bureau.

(c) International applications filed in the Patent and Trademark Office shall be in the English language.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract contains over 150 words.

The disclosure is objected to because of the following informalities:

The specification needs to contain the address of the depository for strain I-3192. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15, 16 and 18-26 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant claims a N-deoxyribosyl transferase that is at least 70% or 80% identical to SEQ ID NO: 2 and contains the residues Y13, D77, D97, E103 and M132, or to SEQ ID NO: 4 and contains the mutation A15T. It also claims a N-deoxyribosyl transferase with greater activity (50% or 5 times) than SEQ ID NO: 2. The claims read on a broad genus of enzymes.

The written description requirement for a genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice or by disclosure of relevant identifying characteristics, i.e. structure or other physical and/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show applicants were in possession of the claimed invention. In the instant case, the specification does not sufficiently describe a representative number of N-deoxyribosyl transferases by actual reduction to practice or by disclosure of relevant identifying characteristics.

Applicant claims N-deoxyribosyl transferase by function only, without any disclosed or known correlation between the elements and their function. While it teaches conservation of residues Y13, D77, D97, E103 and M132 among other *Lactobacillus* species, it does not teach how to conserve those residues and maintain N-deoxyribosyl transferase activity, with only 70% or 80% identity to N-deoxyribosyl transferase. The specification only provides teachings of a mutation in SEQ ID NO: 2 (wt N-deoxyribosyl transferase), A15T (SEQ ID NO: 4). The alanine is not conserved in the other species, yet is obviously important to activity. Therefore, it is unclear what

other mutations could be made, with the sequence still being 70% and 80% identical, but that would affect activity. While mutating the alanine to threonine appears to increase activity, it is unclear what effect there would be if alanine was changed to other residues. Also, Applicants only teach an A15T mutation for increasing activity. There is no teaching of another mutation that will increase activity of N-deoxyribosyl transferase. The skilled artisan cannot envision a sufficient number of embodiments of the instant invention from the instant specification because the specification only discloses one mutation of N-deoxyribosyl transferase that increases activity.

The state of the art at the time of filing does not provide sufficient information on the subject to overcome the deficiencies of the instant specification. There is no description in the art that allows one to envision a representative number of N-deoxyribosyl transferases by disclosing structural or functional features of N-deoxyribosyl transferase so that one of skill in the art could envision the claimed invention. Thus the skilled artisan cannot consult the art at the time of filing to envision a sufficient number of embodiments of the instant invention to see that the applicant was in possession of the claimed genus.

Neither the specification of the instant application or the state of the art at the time of filing teaches a structure-function relationship for a representative number of N-deoxyribosyl transferases. As a result, the skilled artisan would not be able to envision the claimed invention. Therefore applicant has not satisfied the written description requirement to show the skilled artisan that they were in possession of the claimed genus.



The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, it is unclear if Applicants intended a method to be claimed or a protein.

Regarding claim 28, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-16 and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by WO03/025163.

WO03/025163 (IDS reference, translation of description and claims are included) teaches a N-deoxyribosyl transferase from *L. fermentum*, SEQ ID NO: 6, which is identical to SEQ ID NO: 2 in the instant application. It also

teaches a nucleic acid sequence encoding a N-deoxyribosyl transferase (SEQ ID NO: 5). Since claim 28 does not require that the sequence be SEQ ID NO: 3, SEQ ID NO: 5, which is only 1 base off and encodes a N-deoxyribosyl transferases, meets the limitations. The reference also teaches the nucleic acid sequence in a vector, transformed into a cell, preferably E. coli.

***Allowable Subject Matter***

Claim 40 is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE K. JOIKE whose telephone number is (571)272-5915. The examiner can normally be reached on M-F, 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (571)272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michele K. Joike/  
Examiner, Art Unit 1636

Michele K. Joike  
Examiner  
Art Unit 1636